

**ABSTRACT**

***TRYPTOPHAN AS A FUNCTIONAL REPLACEMENT FOR ADP-RIBOSE-ARGININE IN RECOMBINANT PROTEINS***

5       A method is disclosed for producing a polypeptide with a modified activity or stability, by replacing an arginine residue capable of being ADP-ribosylated with a tryptophan or a phenylalanine. In one embodiment, compositions are provided that include polypeptides, such as alpha defensin, with arginine-to-tryptophan or arginine-to-phenylalanine substitutions, where the arginine residue is capable of being ADP-  
10      ribosylated. In another embodiment, methods are disclosed for modifying an immune response in a subject.